

CPP 程式設計題

命題者：Zen

題目名稱(中文/英文)：Calculate Balance

主要測試觀念： 程式基礎、Structures

Basics

- ☒ C++ BASICS 1
- ☒ FLOW OF CONTROL
- ☐ FUNCTION BASICS
- ☐ PARAMETERS AND OVERLOADING
- ☐ ARRAYS
- ☒ STRUCTURES AND CLASSES
- ☐ CONSTRUCTORS AND OTHER TOOLS
- ☐ OPERATOR OVERLOADING, FRIENDS, AND REFERENCES
- ☐ STRINGS
- ☐ POINTERS AND DYNAMIC ARRAYS

Functions

- ☐ SEPARATE COMPILATION AND NAMESPACES
- ☐ STREAMS AND FILE I/O
- ☐ RECURSION
- ☐ INHERITANCE
- ☐ POLYMORPHISM AND VIRTUAL FUNCTIONS
- ☐ TEMPLATES
- ☐ LINKED DATA STRUCTURES
- ☐ EXCEPTION HANDLING
- ☐ STANDARD TEMPLATE LIBRARY
- ☐ PATTERNS AND UML

題目說明：

Several students decided to play the game after the midterm exam. The rules are as follows:

1. Everyone starts with 1,000 dollars.
2. There are a banker and a few winners in a game. If the banker wins, there is no winner.
3. Before the game starts, they decide how much money the banker should pay to winners.
4. After the game, the winners divide the money. If there is a remainder, give it back to the banker.
For example, 20 dollars is divided to three winners. Each winner can get 6 dollars, so the banker only needs to pay 18 dollars.

Please calculate students' balance, after everyone has been a banker once.

輸入說明：

Have multiple tests and read to EOF.

First, input integer N as number of students.

And then input student's names.

Finally, input the information for each game like this:

Banker's name

Money Number of winners ← Two numbers: The money they decide the banker should pay

WinnerA's name and the number of winners. (Winner's name will not repeat.)

WinnerB's name

...

輸出說明：

The output is N lines, each line with the student's name followed by a single blank and their balance. The balance can be a negative number. The names should be printed in the same order they appear on input.

I/O 範例：

	Sample Input	Sample Output
第一組	3 Peter Amy Judy Peter 455 2 Amy	Peter 546 Amy 1352 Judy 1102

	Judy Amy 270 0 Judy 125 1 Amy	
附屬資料： <input checked="" type="checkbox"/> 解答程式：source.cpp <input checked="" type="checkbox"/> 測試資料：input.txt, output.txt		
<input checked="" type="checkbox"/> 易，僅需用到基礎程式設計語法與結構 <input type="checkbox"/> 中，需用到多項程式設計語法與結構 <input type="checkbox"/> 難，需用到多項程式結構或較為複雜之資料型態或結構		
解題時間： 10 分鐘。		
其他註記：		